California Global Warming Solutions Act of 2006

GHG Reporting Tool Training

General Stationary Combustion Facilities (GSCs)

California Air Resources Board

March 17, 2009

Participation Information

- **Webinar Registration Information**
  (need to pre-register to participate)

  https://www2.gotomeeting.com/register/345537296

- **Slides for Today's Training:**
  http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-tool.htm

- **Reporting Tool Guidance for GSCs:**
  http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgstepwisegsc.pdf

- **Regulation and Staff Report**
  (includes Regulation and other materials):

  http://www.arb.ca.gov/regact/2007/GHG2007/GHG2007.htm

Using the Webinar

- Preregistration is required, see previous slide for link

- For Audio, each participant has a unique dial-in and access code
  - Numbers visible after joining webinar
  - Must enter Audio PIN to join audio
  - Call is billed as normal long-distance call

- ARB staff will mute/and unmute lines
  - "Raise Hand" to have your line activated for verbal questions

- Type questions into Chat Box for text questions

Additional Reporting Tool Training
(see training website for materials)

Reporting Sector	Date	Time (PDT)
General Stationary Combustion	March 17	10:00 a.m. to 12:00 p.m.
Cement Plants	March 26	10:00 a.m. to 12:00 p.m.
Electricity Retail Providers & Marketers	March 26	1:00 p.m. to 3:00 p.m.
Electricity Generating & Cogeneration Facilities	March 27	10:00 a.m. to 12:00 p.m.
Refineries & Hydrogen Plants; Oil & Gas Production	March 30	9:30 a.m. to 12:30 p.m.

Agenda

- **Introduction and Overview**

- **Summary of Requirements**

- **Reporting Tool Overview**

- **Case Study 1 – Basic Facility**

- **Case Study 2 – Complex Facility**
  - Introduction only -- Attend Electricity Generation and Cogeneration training for full example

- **Wrap-up**

Mandatory Reporting

- **Regulation is now in effect**

- **Schedule modification (2009 only):**
  - All reports on 2008 emissions are due June 1, 2009
  - Provides additional time for some reporters
  - See Regulatory Advisory
    - http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgschedadvisory.pdf
  - Extra time provided for 2009 submittals only

Purpose of this Training

- Demonstrate use of GHG Reporting Tool for reporting

- Assumes basic understanding of reporting requirements
    - Will not discuss GHG calculation methods
    - Refer to extensive Guidance Documents for questions about calculating GHG emissions
        - http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep-guid/ghg-rep-guid.htm
    - Also see GSC reporting workshop slides presented in December 2008 for an overview
        - http://www.arb.ca.gov/cc/ccei/meetings/meetings.htm

Summary of Reporting Requirements
for
General Stationary Combustion Facilities (GSCs)

What is a GSC?

- <u>Not</u> already included in another sector (refinery, cement, power, etc.)
- Emits ≥ 25,000 metric tonnes CO_2/year from stationary combustion sources
    - Facility-wide total CO_2 emissions
    - Single facility only, even if multiple facilities under common ownership
    - Include biomass and biogas combustion
    - Do not include process, fugitive, mobile emissions in assessment

Major GSC Sectors Affected
(only if ≥ 25,000 metric tonnes/yr CO_2 from combustion)

- Natural gas transmission
- Industrial gases
- Paperboard manufacture
- Large colleges and universities

- Oil and gas production
- Food processing
- Steel foundries
- Mineral processes
- Glass container
- Malt beverages

GSC Reporting

- Party with operational control responsible for report submittal

- Report fuel types and use

- Report stationary combustion emissions of CO_2, CH_4, N_2O
  - CO_2 from biomass fuels reported separately

- Exempt sources as specified in regulation §95101(c) (e.g., portable equipment and backup generators)

- Use default factors for most common fuels

Preparing for Reporting

- 2009: Must report 2008 emissions in 2009
  - See Regulation and Guidance for methods
  - Reports due June 1, 2009
  - Verification is optional for 2009 emissions reports

- 2010: Emissions data report must meet full requirements of the regulation
  - Monitoring equipment, procedures should be in place as of January 1, 2009
  - Reports due as specified in the regulation
  - Everyone must verify their 2009 emissions data reports in 2010
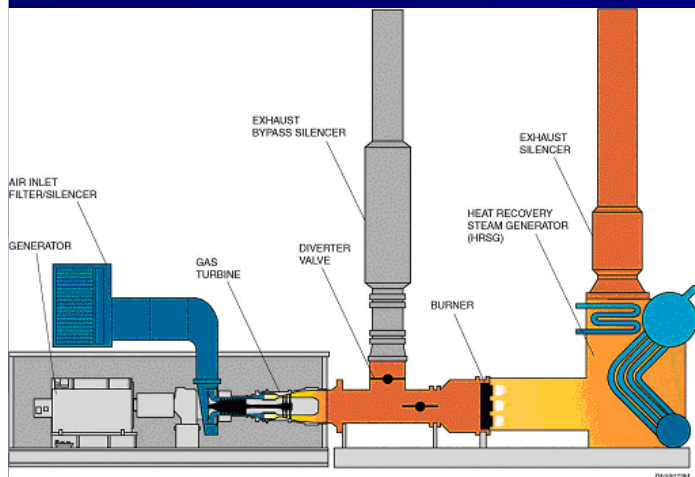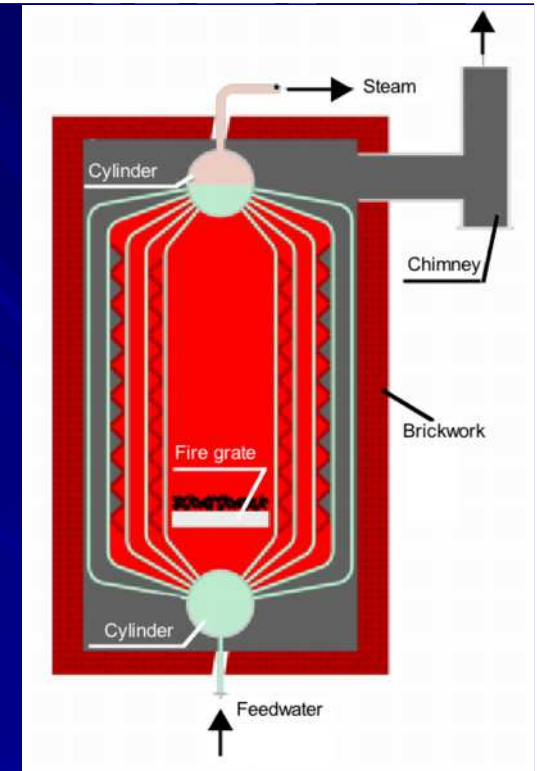
GHG Reporting Tool

- GHG Reporting Tool designed to directly address needs of reporters
- Provides reporting, QA, certification, tracking, and verification access
- Allows password-protected access by multiple facility users
- Training Site available for practice
- Shares software platform used by U.S. EPA and The Climate Registry

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General Usage of the Tool

Using the GHG Reporting Tool
Year 1 –2008 Report Year

1. Register Your First Facility & User Account (Home Page)
2. Register Additional Facilities (Inside Tool)
3. Complete Basic Facility Information
4. Set Up Additional Users
5. Create Annual Report Structure (Emitting Activities, Units…)
6. Enter Annual Data for 2008
7. Submit Annual 2008 Report

Using the GHG Reporting Tool
Year 2 – 2009 Report Year

1. Update Annual Report Structure If Needed.
2. Enter Annual Data for 2009
3. Submit Annual 2009 Report

❖ Complete reports must be certified, and then verified as specified in the regulation.

❖ Verification is optional for reports submitted in 2009

Step 1: Preparing for Reporting

- **Review Reporting Tool Primer & Users Guide**
  - http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-tool.htm

- **Review GSC Guidance for Reporting Using Tool**
  - http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgstepwisegsc.pdf

- **Collect Facility Information**
  - Equipment subject to reporting
  - Fuel use records (facility level & by meter)
  - Purchase records for electricity, heat, cooling

Workflow for Reporting Tool

2. Register using ARB ID and Access Code

3. Input facility descriptive information

4. Input facility configuration for reporting
   - Add emitting activities, fuels, devices

5. Input fuel use and emissions for defined sources

6. Report energy and production data

7. QA and Certification of data

Workflow for Reporting Tool

2. <u>Register using ARB ID and Access Code</u>

3. <u>Input facility descriptive information</u>

4. Input facility configuration for reporting
   - Add emitting activities, fuels, devices

5. Input fuel use and emissions for defined sources

6. Report energy and production data

7. QA and Certification of data

Step 2
Register using ARB ID and Access Code

- Use ARB ID and Access Code provided by ARB

- You must "Register" first, use the Registration button, <u>not</u> "Login"

- The first person to register is the default Facility Manager
  - Facility Manager certifies data as complete and accurate
  - Two people may be designated as Facility Managers

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Step 2
Create Account

- Enter name, address, email

- Email address must be unique
  - If email address is already in system, use that account to associate with additional facilities
    - "Register Additional Organization" after login

- Create personal User ID and Password
  - All future logins use this information
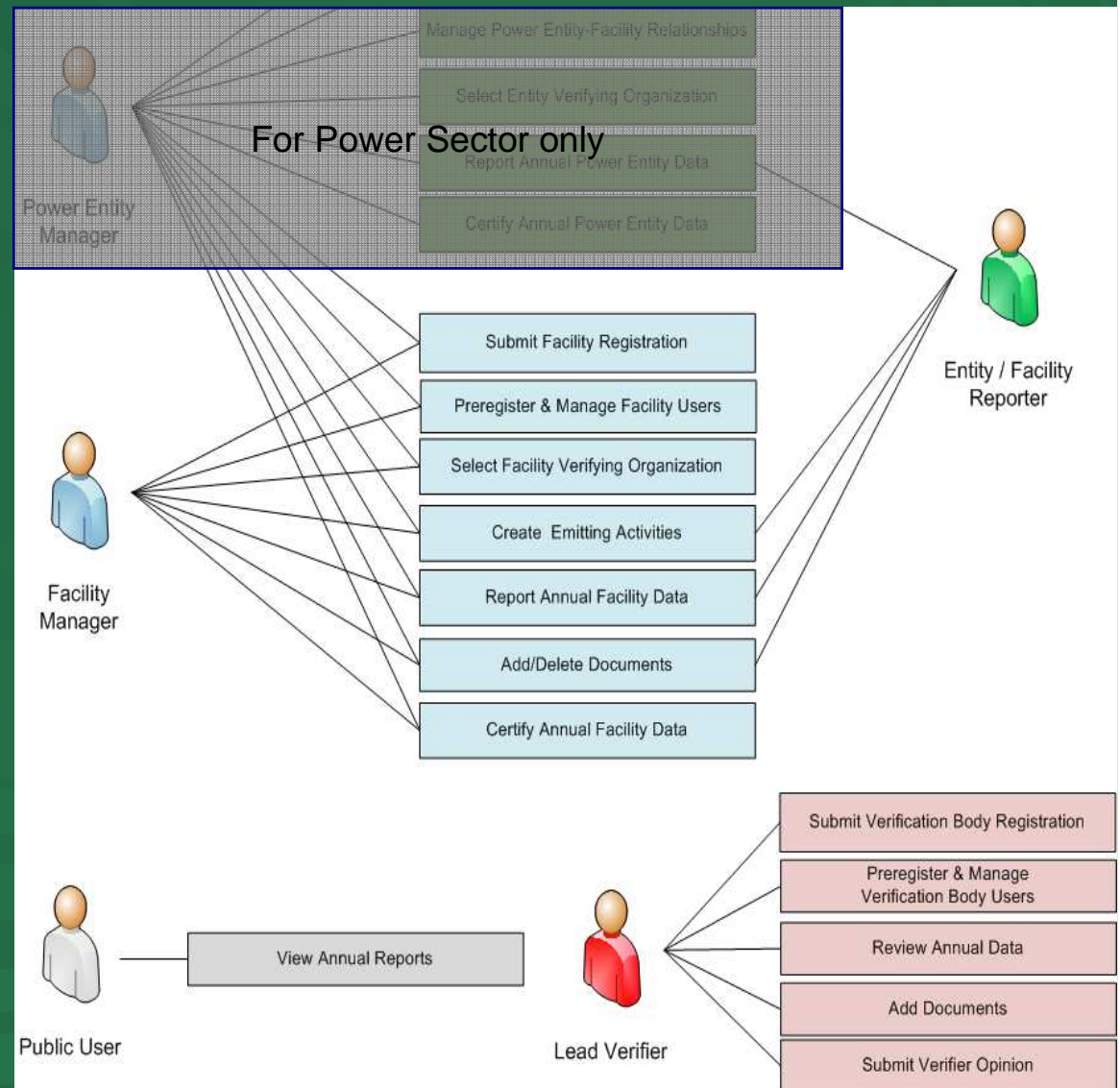
- Accept User Agreement

- Account is created

Step 3
Input Facility Descriptive Info

- Future logins to to account with personal User ID and password (not ARB ID)

- Enter Facility Details
  - Primary & Secondary Sector
  - Confidential data flag – set as desired

- Addresses
  - Mailing and physical

- Geographic Location (lat/long)
  - http://www.batchgeocode.com/lookup/ (example only)

- Contacts (i.e., Users)
  - Allow others access to facility data

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Facility Mangers and Facility Reporters

- Access and responsibilities

- Facility manager roles and reporter roles

- Two facility managers possible

For Power Sector only

Power Entity Manager
- Manage Power Entity-Facility Relationships
- Select Entity Verifying Organization
- Report Annual Power Entity Data
- Certify Annual Power Entity Data

Facility Manager
- Submit Facility Registration
- Preregister & Manage Facility Users
- Select Facility Verifying Organization
- Create Emitting Activities
- Report Annual Facility Data
- Add/Delete Documents
- Certify Annual Facility Data

Entity / Facility Reporter

Public User
- View Annual Reports

Lead Verifier
- Submit Verification Body Registration
- Preregister & Manage Verification Body Users
- Review Annual Data
- Add Documents
- Submit Verifier Opinion

Step 2:
Demonstrate Registration

Step 3:
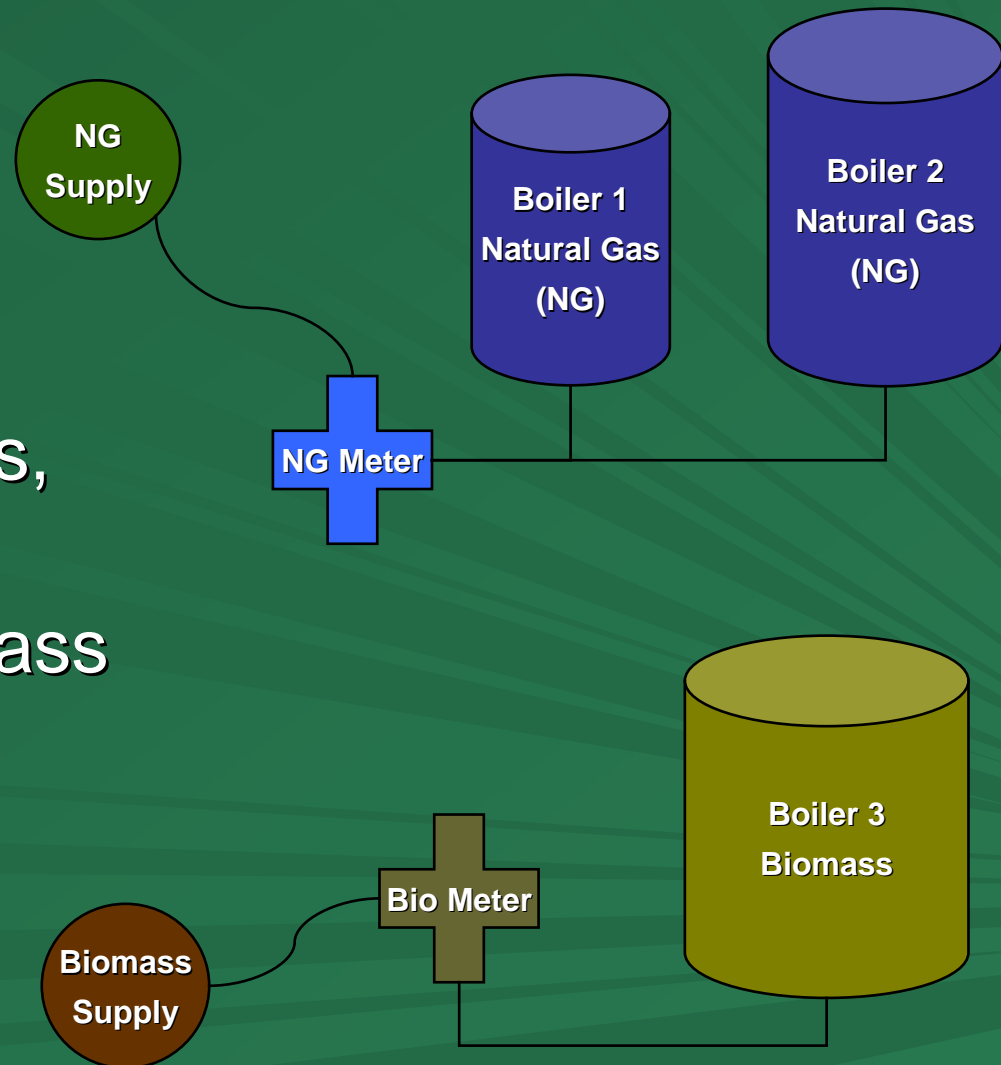## Demonstrate Input of Facility Info

Case Study 1
Basic Facility
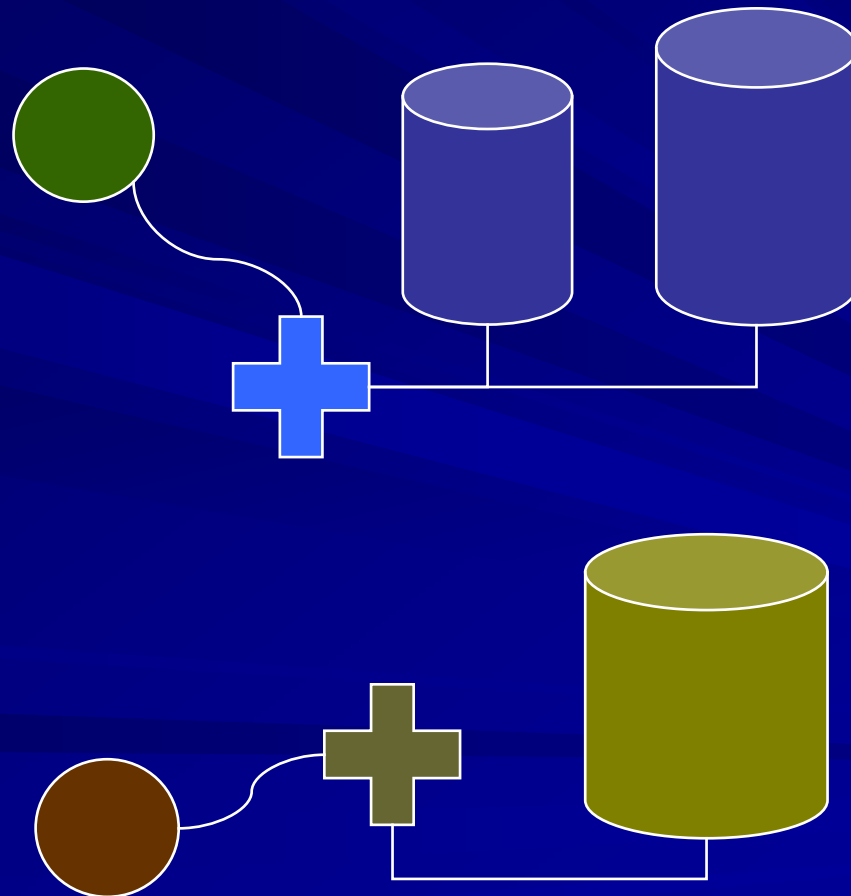
Case Study 1
Basic Facility Reporting

- Facility Configuration
- Three boilers
  - Two natural gas, common meter
  - One pure biomass

NG Supply

Boiler 1 Natural Gas (NG)

Boiler 2 Natural Gas (NG)

NG Meter

Boiler 3 Biomass

Bio Meter

Biomass Supply

Workflow for Reporting Tool

2. Register using ARB ID and Access Code

3. Input facility descriptive information

4. <u>Input facility configuration for reporting</u>
   - Add emitting activities, fuels, devices

5. Input fuel use and emissions for defined sources

6. Report energy and production
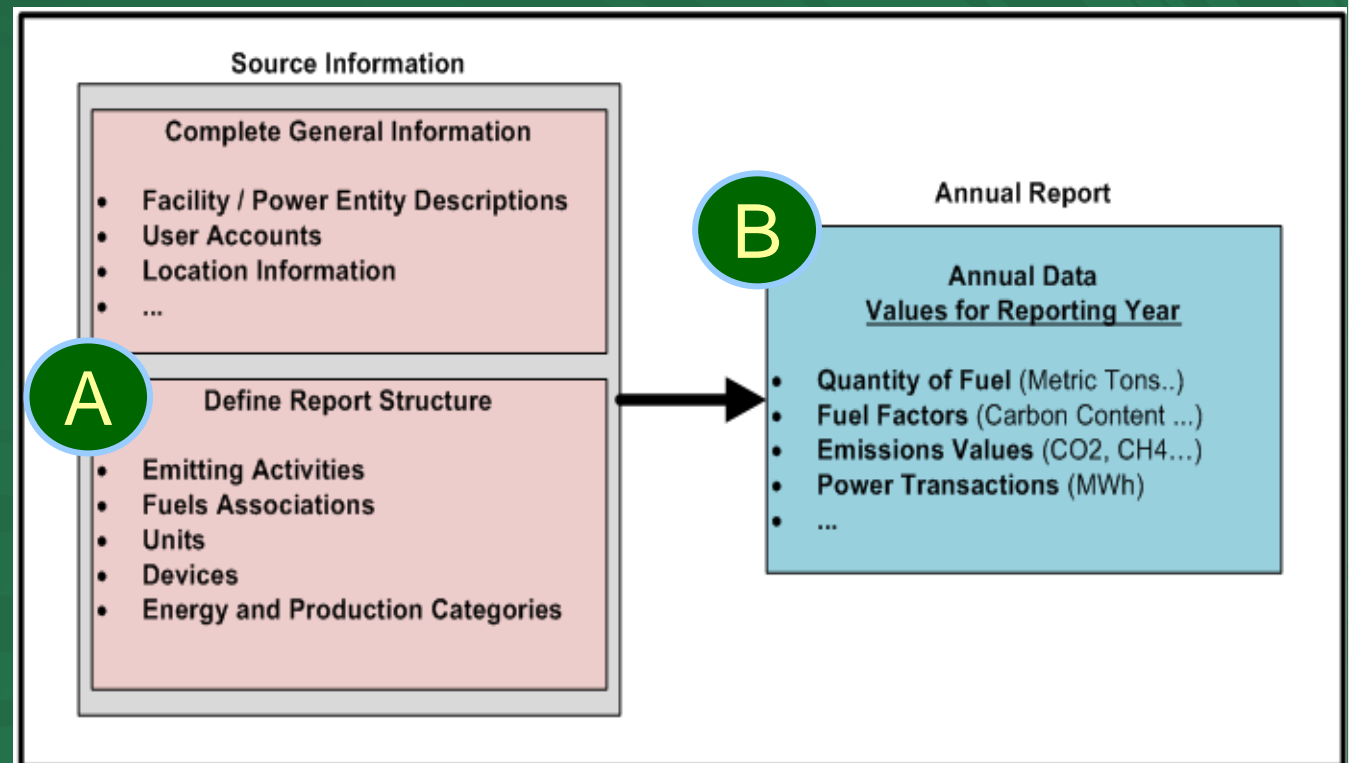
7. QA and Certification of data

Step 4
Input Facility Configuration

- **Create Emitting Activities**
  - Include associated fuels for each activity

- **Identify "devices" (i.e., fuel meters)**
  - Used for "last point of metering," as applicable

- **Add generating units (if present)**
  - Electricity or Cogeneration

- **Energy and Production**
  - Indirect energy use data
  - Electricity or Cogen info (if present)

Sequence for Reporting

A. First, Define Report Structure: Set up emitting activities and fuels, generating units, devices (Step 4)

B. Next: Add fuel use, fuel factors, and emissions for items designated in Part A (Step 5)

Source Information

Complete General Information

- Facility / Power Entity Descriptions
- User Accounts
- Location Information
- ...

(A)

Define Report Structure

- Emitting Activities
- Fuels Associations
- Units
- Devices
- Energy and Production Categories

(B)

Annual Report

Annual Data
Values for Reporting Year

- Quantity of Fuel (Metric Tons..)
- Fuel Factors (Carbon Content ...)
- Emissions Values (CO2, CH4...)
- Power Transactions (MWh)
- ...

Summary of Key Terms

- **Emitting Activity**
  - Equipment or process with capacity to produce GHG emissions
  - Can be individual activities (e.g., a specific boiler) or a complete reporting category (e.g., all facility stationary combustion)
  - Must meet 95% accuracy unless de minimis emissions

- **"Device"**
  - Used to indicate the presence of a <u>fuel meter</u> used for reporting fuel use, <u>not</u> emissions
  - <u>Not</u> typically a direct source of emissions and not a piece of emitting equipment
  - Not required to meet 95% accuracy unless used for emissions calculations

Case Study 1
Basic Facility

- **Facility Configuration**
- **Three boilers**
  - Two natural gas, common meter
  - One pure biomass

NG Supply

NG Meter

Boiler 1 Natural Gas

Boiler 2 Natural Gas

Biomass Supply

Bio Meter

Boiler 3 Biomass

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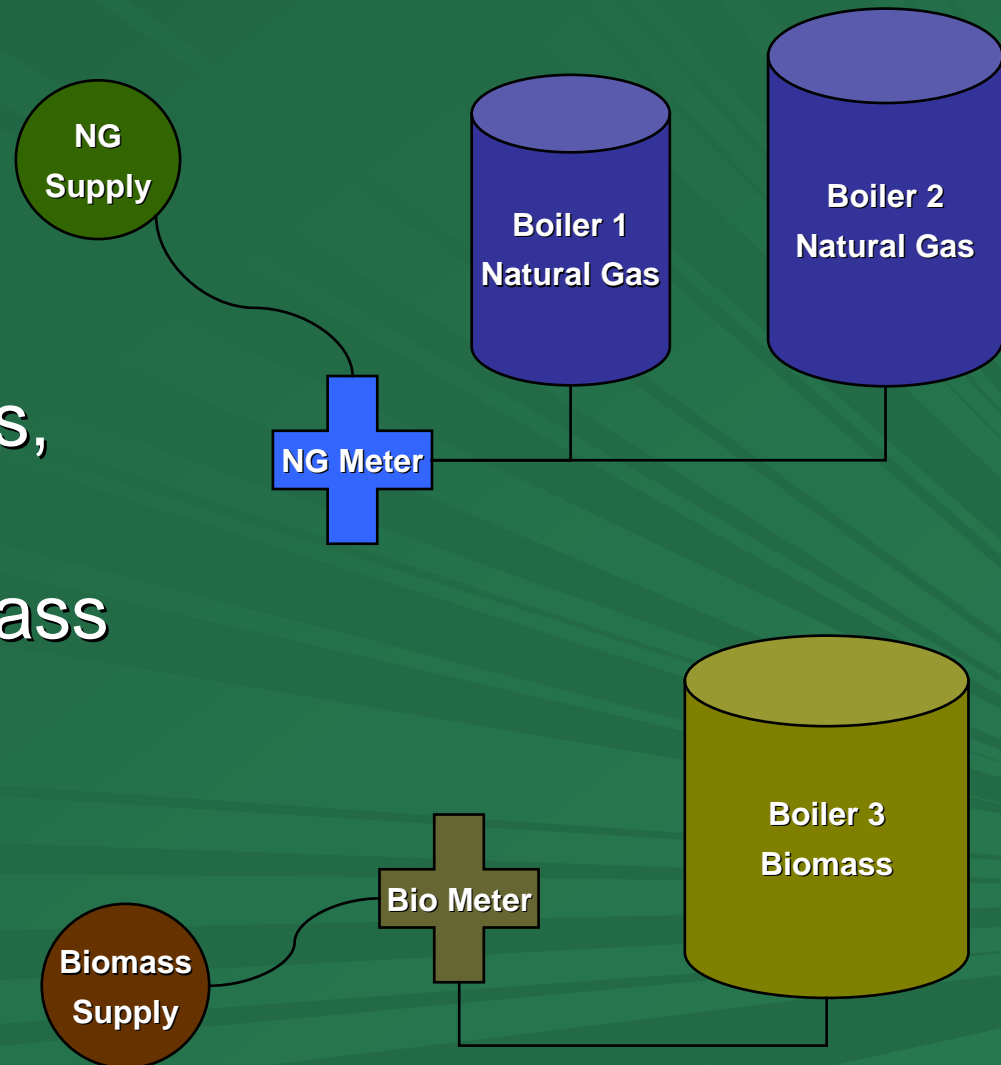
Step 4:
Demonstrate Input Facility Configuration

Workflow for Reporting Tool

2. Register using ARB ID and Access Code

3. Input facility descriptive information

4. Input facility configuration for reporting
    - Add emitting activities, fuels, devices

5. <u>Input fuel use and emissions for defined sources</u>

6. Report energy and production data

7. QA and Certification of data

Step 5
Input Fuel Use and Emissions

- Beginning with Annual Reporting menu, "Create New Submission"
- "Report Additional Data" to identify Emitting Activity
- Select Emitting Activity and Fuel for each
- Input fuel use for each fuel and emissions calculation data
- Select calculation method; input emissions data or let tool calculate
- Repeat for each emitting activity until finished

Step 5: Fuel Use and Emissions Data Entry Cycle

- **For each emitting activity, cycle through each fuel, and input fuel use and emissions data**

Emissions and Fuels Submission

Submission Hub
(View All Reported Records)

Year: 2008
Sub ID: 500

Facility: ABC

Fuel Data | Emissions Data | Device Fuels | Documents

Name	Amount	...

Add Data

Return to Submission

Step 1. Emitting Activity
Select Emitting Activity

Edit Data

Edit Data

Step 4 Emissions Records
View Records

Step 2. Fuels
Select Fuel
Report Fuel Data

Step 3. Emissions
Select Fuel
Report / Calculate Emissions

Creating New Emissions and Fuels Submission

Graphics from Users Guide. See Guide for more details.

http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-tool.htm

Step 5:
Demonstrate Input Fuel Use and Emissions

Workflow for Reporting Tool

2. Register using ARB ID and Access Code

3. Input facility descriptive information

4. Input facility configuration for reporting
   - Add emitting activities, fuels, devices

5. Input fuel use and emissions for defined sources

6. <u>Report energy and production data</u>

7. QA and Certification of data

Step 6
Report Non-Emissions Data

- **Energy and Production**
  - For GSCs, includes electricity, heat, cooling purchased (i.e., indirect energy)
  - For reporting electricity generating units and cogen, please participate in 3/27 webinar at 10:00 a.m. to 12:00 p.m.

- **Use Blue Annual Reporting Tab**
  - "Create new submissions"
  - Select Energy and Production from pull-down

- **Enter energy use and select provider**

Step 6:
Demonstrate Report Energy and Production Data

Workflow for Reporting Tool

2. Register using ARB ID and Access Code

3. Input facility descriptive information

4. Input facility configuration for reporting
   - Add emitting activities, fuels, devices

5. Input fuel use and emissions for defined sources

6. Report non-emissions data

7. <u>QA and Certification of data</u>

Step 7
QA and Certification of Data

- QA checks help ensure complete reporting

- The quality assurance system provides Warning messages and Critical Errors

    - Critical Errors or Failures must be corrected before certifying data

    - "Warnings" should be evaluated to ensure that errors are not present that affect the completeness or accuracy of the submittal

- Run separate QA on Emissions and Fuels data and Energy and Production data

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Step 7
QA and Certification of data

- **After QA, then "Ready for Certification"**
  - Clicking locks data and queues data for Facility Manager for final Certification

- **Only those designated as a Facility Manager for the facility may certify the report**
  - Completing "Certification" indicates that data are complete and accurate
  - Upon Certification, data are locked and cannot be edited without unlocking data
  - This mechanism prevents editing of data during the verification process unless needed

Step 7:
See Reporting Tool Users Guide for QA and Certification Details
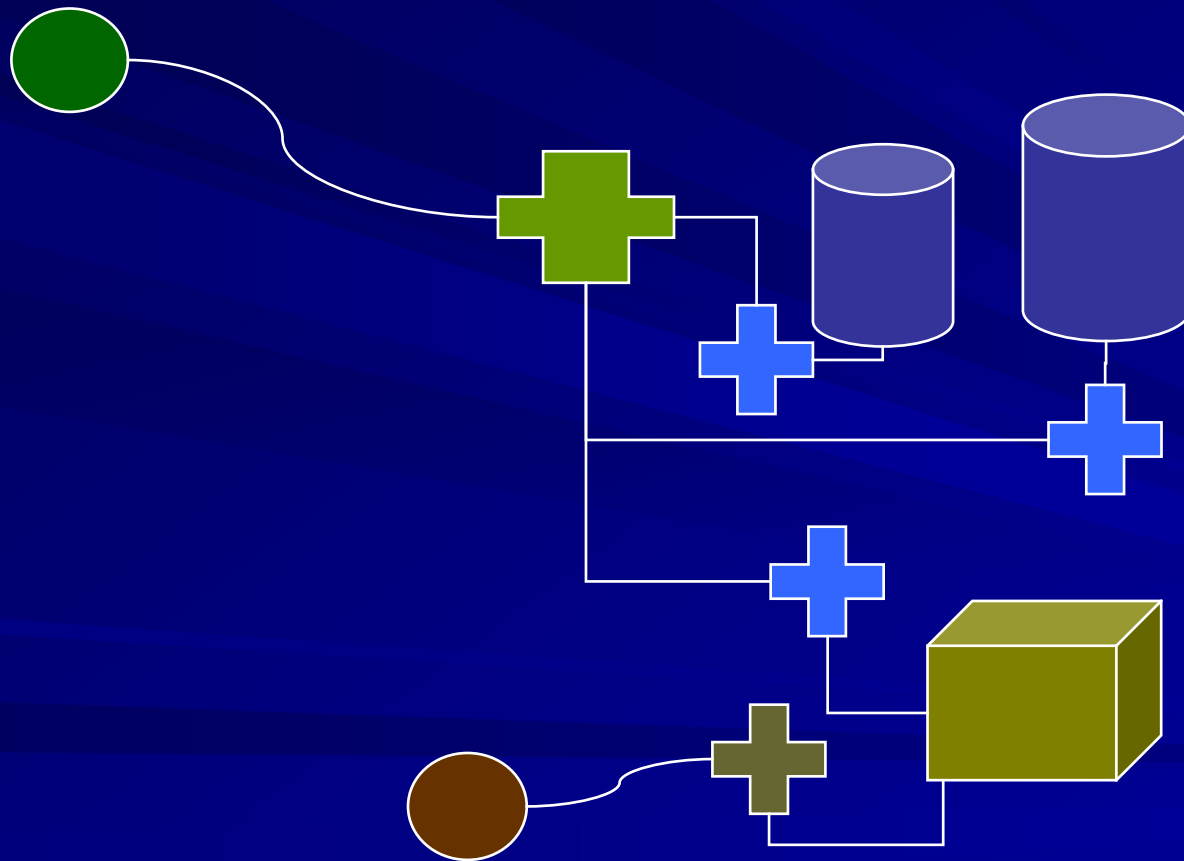
Summary of Reporting Process

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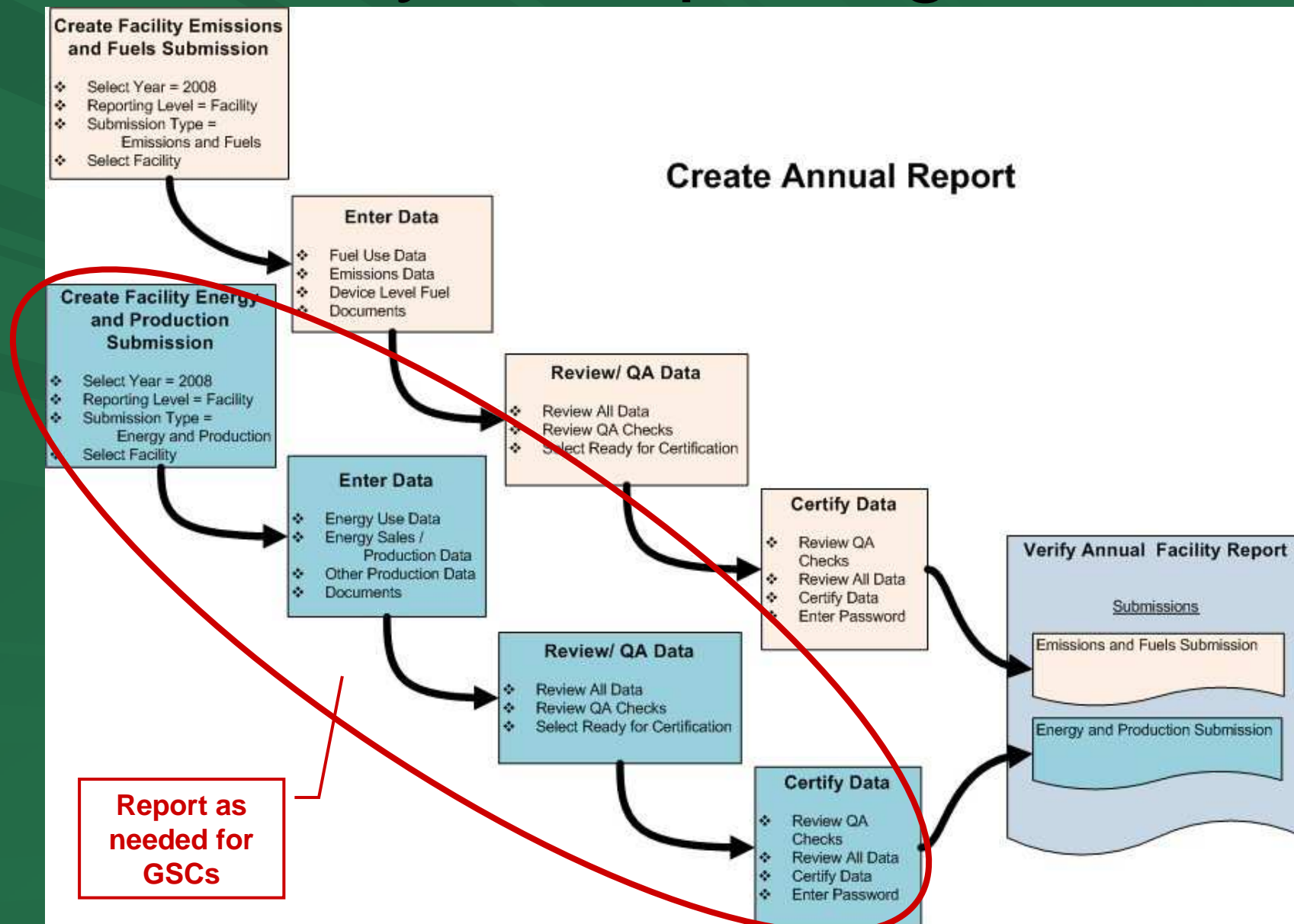
Questions and Comments

- For verbal comments, "Raise Hand" using Webinar so we can activate your line

- Or Type question in Webinar screen

Case Study 2
Complex Facility

Case Study to be demonstrated March 27 during Electricity Generation training.

10:00 a.m. to 12:00 p.m.

Introduction: Case Study 2 Complex Facility

- **Facility Configuration**
- **Two boilers**
  - Two natural gas boilers, separate meters
- **Cogeneration**
  - Natural gas
  - Biomass

NG Supply

NG Rev. Meter

NG Meter

Boiler 1 Natural Gas

Boiler 2 Natural Gas

NG Meter

NG Meter

Cogeneration Unit

Bio Meter

Biomass Supply
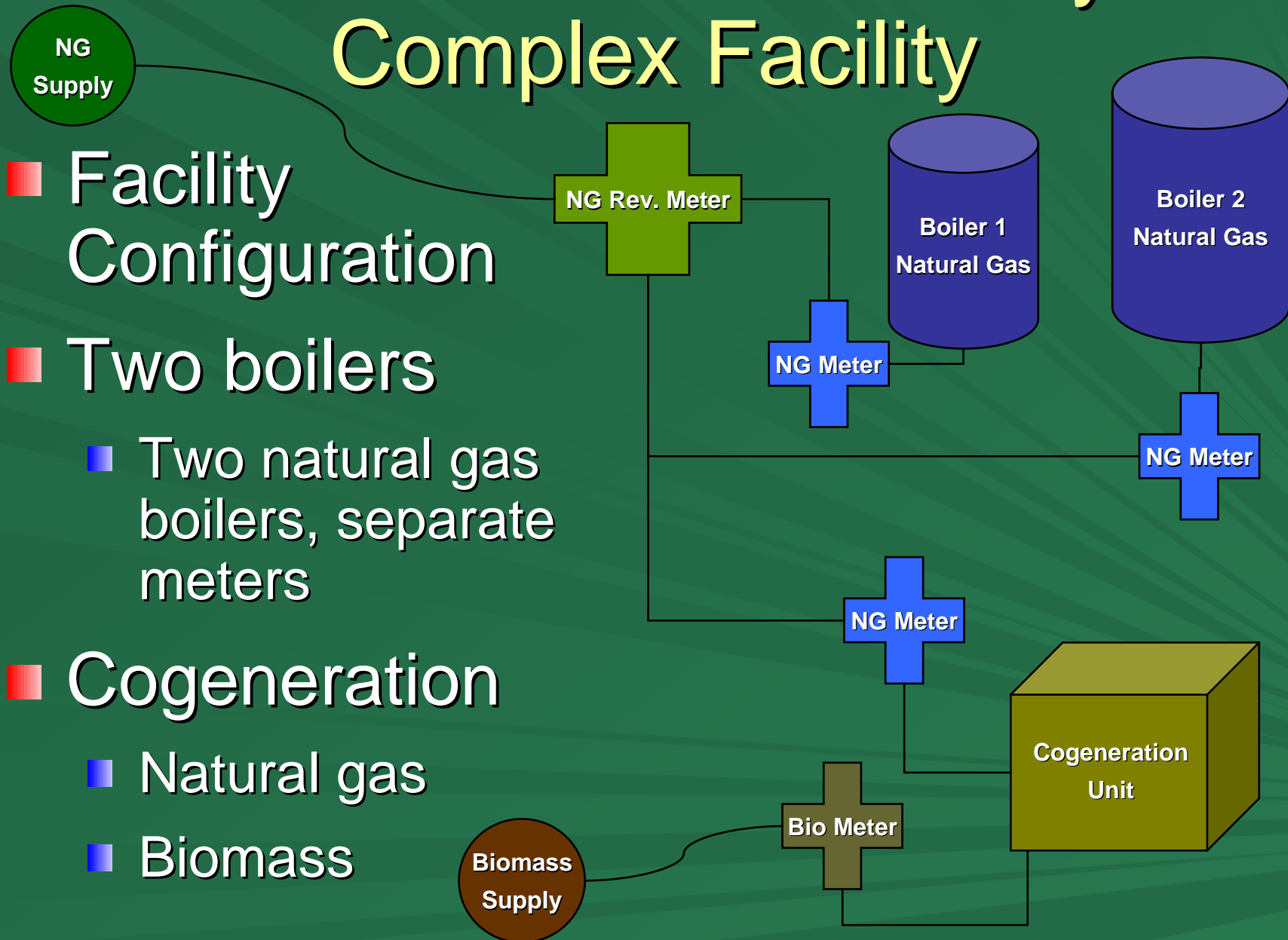
GSC with Cogen or Electricity Generation

- If cogeneration or electricity generation ≥ 1 MW and emits ≥ 2,500 metric tonnes from these sources:
  - Additional reporting requirements apply
  - Refer to cogen and electricity generation reporting requirements
  - Descriptive flow chart in guidance

- If generation thresholds not met, report emissions as part of stationary combustion

GSC with Cogeneration or Electricity Generation

- **Several possible configurations for reporting**
  - Based on regulation requirements, meter accuracy, desired level of aggregation, etc.

- **Preview options shown as examples**

- **Cogeneration Case Study to be provided on Friday, March 27, 2009 during Electricity Generation Training at: 10:00 a.m. to 12:00 p.m.**
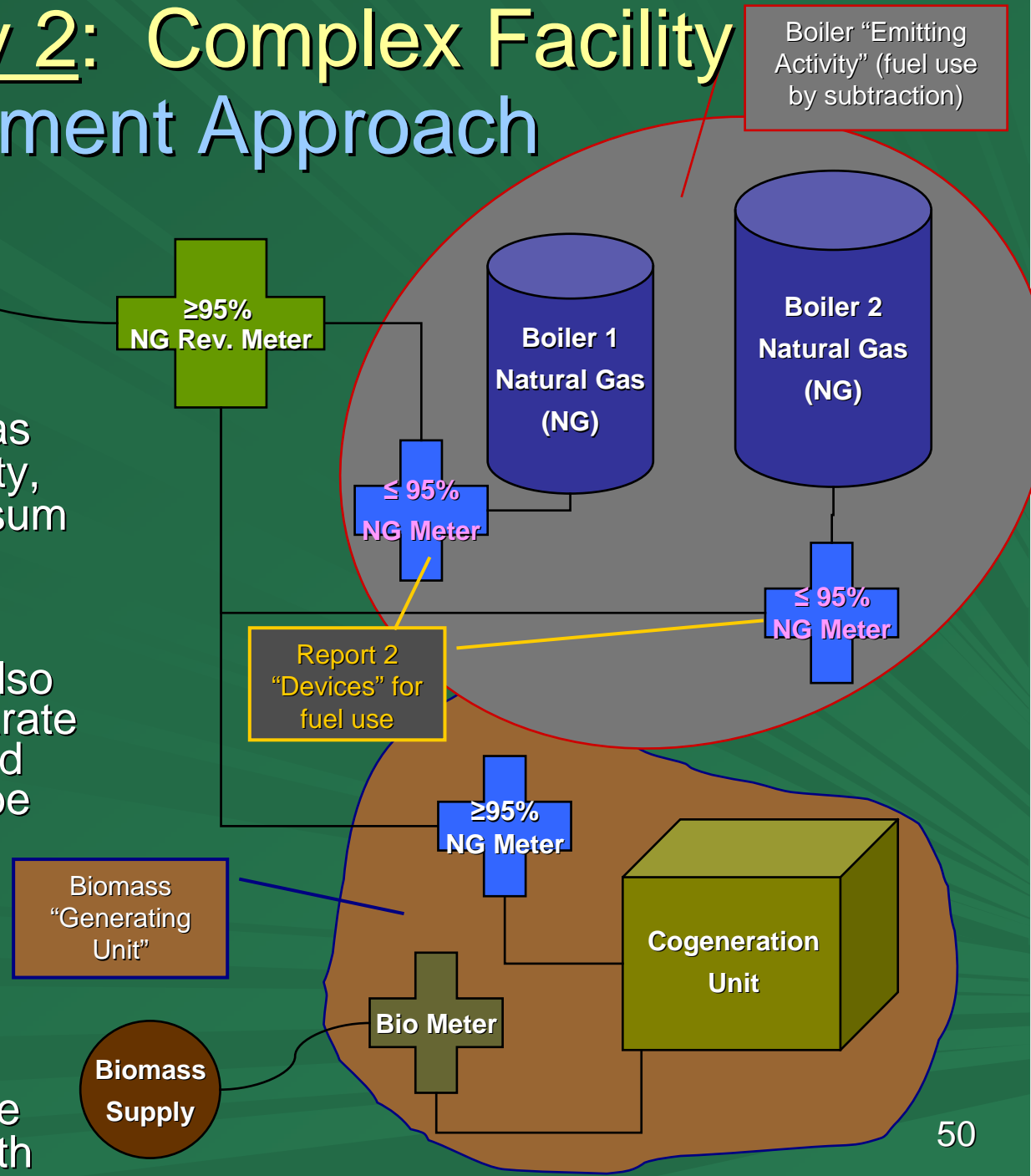
Case Study 2: Complex Facility
Equipment Approach

Boiler "Emitting Activity" (fuel use by subtraction)

NG Supply

- **Option A** for configuring reporting:
  - Include both boilers as single Emitting Activity, report emissions as sum
  - Include 2 devices for meter-level fuel use
  - Note: Boilers could also be split into two separate emitting activities, and "devices" would not be required

  And

  - Include Cogen as Emitting Activity
  - Include two fuels for activity and report use and emissions for both

≥95% NG Rev. Meter

Boiler 1 Natural Gas (NG)

Boiler 2 Natural Gas (NG)

≤ 95% NG Meter

≤ 95% NG Meter

Report 2 "Devices" for fuel use

≥95% NG Meter

Biomass "Generating Unit"

Cogeneration Unit

Bio Meter

Biomass Supply

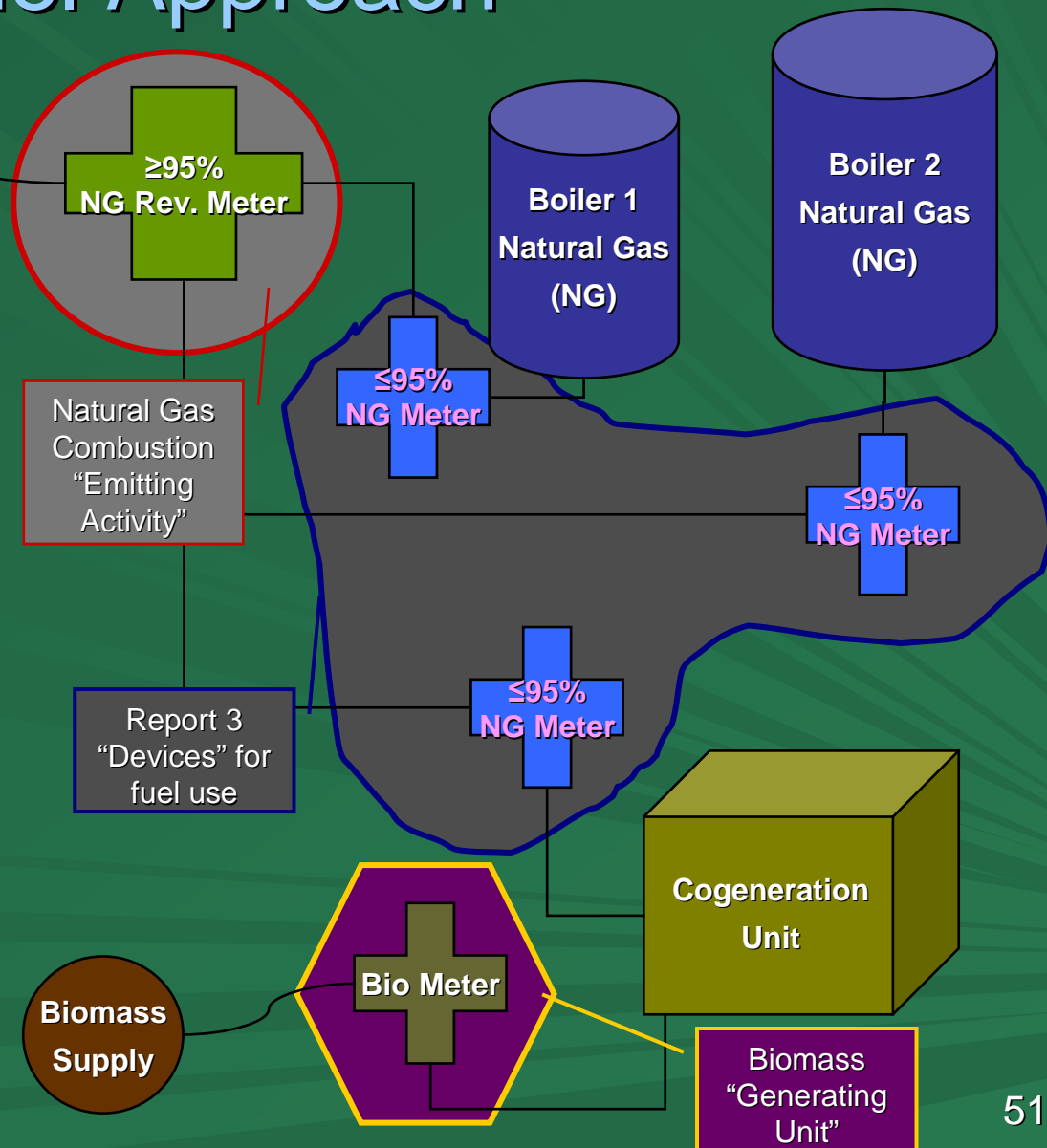# Case Study 2: Complex Facility
Fuel Approach

NG Supply

- **Option B** for configuring reporting:
  - Include main Natural Gas meter as emitting activity for emissions reporting and…
  - Include 3 "devices" for meter-level fuel use reporting (2 boilers + cogen)

  And

  - Include Cogen biomass emitting activity to report that fuel use and emissions

≥95% NG Rev. Meter

Boiler 1 Natural Gas (NG)

Boiler 2 Natural Gas (NG)

Natural Gas Combustion "Emitting Activity"

≤95% NG Meter

≤95% NG Meter

Report 3 "Devices" for fuel use

≤95% NG Meter

Cogeneration Unit

Bio Meter

Biomass Supply

Biomass "Generating Unit"

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GSC with Cogen or Electricity Generation

- Complex facility Case Study to be demonstrated during
  Electricity Generation Training
  Friday, March 27th
  10:00 a.m. to 12:00 p.m.

Additional Questions and Comments?

ARB Contacts

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GHG Mandatory Reporting Website
*http://www.arb.ca.gov/cc/reporting/
ghg-rep/ghg-rep.htm*

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Thanks for participating